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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,200	05/24/2001	Sang-Ryul Park	678-658 (P9451)	3891

7590 04/22/2004

Paul J. Farrell, Esq.
DILWORTH & BARRESS, LLP
333 Earle Ovington Blvd.
Uniondale, NY 11553

EXAMINER	
CASCHERA, ANTONIO A	
ART UNIT	PAPER NUMBER
2676	12

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/865,200	PARK, SANG-RYUL	
	Examiner	Art Unit	
	Antonio A Caschera	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 2/10/2004.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the pending application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glen (U.S. Patent 6,268,847 B1), Iwamura (U.S. Patent 5,844,623) and Yamagishi (U.S. Patent 4,908,614).

In reference to claims 1 and 4, Glen discloses a video graphics method and apparatus for improving the quality of video data displayed on a display device (see lines 1-5 of abstract) which the office interprets functionality equivalent to the color display driving apparatus of applicant's claim. Glen also discloses the system receiving two separate sets of data, RGB and YUV (see #22 and 24 of Figure 1). Glen discloses the format of the RGB data to be in the form

of 8-bits (see column 2, lines 33-37) which the office interprets as in a digital format. Glen also discloses the incoming YUV data produced from a cable box, satellite or DVD player (see column 1, lines 25-29) which the office interprets as in a digital format. Glen discloses an RGB conversion module (see #12 of Figure 1) receiving RGB data and a first color base conversion module (see #14 of Figure 1) receiving YUV data, these modules preparing the data for later mixing (see column 3, lines 10-13, 34-36, 59-62 and #26, 28 and 16 of Figure 1). The office interprets the above disclosed conversion modules to inherently comprise of some sort of first and second memories storing the RGB and YUV data, respectively, in order to temporarily hold data for performing conversions upon, such as, for example, "scratchpad" memories or caches. Glen also discloses the first color base conversion to perform YUV-to-RGB conversion (see column 3, lines 34-36 and #24, 14, 28 of Figure 1). Note, Glen does not explicitly disclose the video processing methods and apparatus applied to a portable mobile telephone display however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the methods and apparatus of Glen within an LCD of a portable telephone since it has been held that making a device portable is not patently distinguishable over other devices (*In re Lindberg,* 194 F.2d 732, 93 USPQ 23 (CCPA 1952)). Glen does not explicitly disclose an OSD controller however Iwamura does. Iwamura discloses an OSD controller in a television receiver/decoder (see #6 of Figure 2). Iwamura also discloses the OSD block to construct the on screen display information and assign appropriate colors to each pixel using a color look-up table (see column 3, lines 59-61). Iwamura discloses a mixer implemented to mix RGB data with RGB data converted from YUV data via a matrix converter (see #43, 44 and matrix converted #45, mixer #47 and #11 of Figure 2). Iwamura also discloses displaying the mixed data onto a

display (see #32 of Figure 2). Note although Iwamura does not explicitly disclose the OSD to perform the writing of color data to their respective memories, mixing the RGB and converted RGB data and displaying the mixed data, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an OSD controller to perform the above tasks as it is a matter of design choice as seen by the office as other controllers/processors could implement the writing and mixing of data. Further, the above operations are standard tasks performed on conventional computer systems by some sort of graphics adapters or controllers as disclosed by Glen above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the RGB and YUV processing, including color conversions and storing techniques, of Glen with the on-screen display circuitry of Iwamura in order to improve accuracy when converting YUV-to-RGB data, enhancing on-screen display data when mixed with video data and displaying them both together on a display (see column 2, lines 8-12 of Glen). Neither Glen nor Iwamura explicitly disclose a timing signal generator generating a timing signal for alternately enabling first and second memories. Yamagishi discloses an image data output apparatus having a plurality of memories and a timing pulse generator, the timing pulse generator supplies read clock signals to associated memories for alternating access to the memories (see lines 1-4 of abstract, column 2, lines 61-66, #1, 2, 4 and 8 of Figure 1 and A-D of Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the RGB and YUV processing and storing techniques of Glen and the on-screen display circuitry of Iwamura with the memory access and timing generation techniques of Yamagishi in order to output pixel data from multiple memories

correctly from one memory after another, expanding memory storage and processing abilities, even at higher timing speeds (see column 2, lines 18-23 of Yamagishi).

In reference to claim 2, Glen, Iwamura and Yamagishi disclose all of the claim limitations as applied to claim 1 above in addition, Iwamura discloses an expander unit which increases the size of video data, in particular, enlarges the horizontal pixel number by four-thirds the size to become compatible with the size of the selected aspect ratio of the display (see columns 3-4, lines 64-6). This expanded data is then passed onto a RGB converter to convert the data to RGB format (see #60 and #11 of Figure 2). Iwamura does not explicitly disclose the data being formatted to be of YUV color space type however it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an expander like hardware with YUV data in order to process and display a compatible size of color data onto a display. Further, the Iwamura reference discloses the theory of formatting data to be compatible with a display which the office believes the scope of claim 2 is directed more towards rather than the type of data being formatted.

In reference to claim 3, Glen, Iwamura and Yamagishi disclose all of the claim limitations as applied to claim 1 above. Iwamura discloses a mixer implemented to mix RGB data with RGB data converted from YUV data via a matrix converter (see #43, 44 and matrix converted #45, mixer #47 and #11 of Figure 2). Note although the mixer of Iwamura is not disclosed to be comprised within an OSD controller, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the above hardware in an OSD controller as the location of where the hardware is placed is a matter of design choice,

preferred by the inventor, as seen by the office (*In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965)).

In reference to claim 5, Glen and Iwamura disclose all of the claim limitations as applied to claim 4 above. Glen discloses the system receiving two separate sets of data, RGB and YUV (see #22 and 24 of Figure 1). Glen discloses an RGB conversion module (see #12 of Figure 1) receiving RGB data and a first color base conversion module (see #14 of Figure 1) receiving YUV data, these modules preparing the data for later mixing (see column 3, lines 10-13, 34-36, 59-62 and #26, 28 and 16 of Figure 1). Further, Yamagishi also discloses providing pixel data from the multiple memories to multiple latches (see #1, 2, 4, 61, 62 and 64 of Figure 1).

Response to Arguments

4. Applicant's arguments, see pages 4-5, filed 2/10/04, with respect to the rejection(s)of claim(s) 1-5 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yamagishi.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (703) 305-1391. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (703)-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Matthew C. Bella

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

aac

3/19/04